## REMARKS

In the Advisory Action (mailed August 8, 2004), the Examiner sustained the claim rejections of the previous Final Office Action (mailed February 13, 2004). In the previous Final Office Action, the Examiner rejected claims 1-18 under § 102 as being anticipated by USP 5,742,086 issued to Rostoker et al. (Rostoker). In this Preliminary Amendment, Applicants have amended claims 1, 3, 4, 6, 10, 12, 14, and 15. No claims have been added or canceled. Accordingly, claims 1-18 will be pending after entry of this Preliminary Amendment. Reconsideration of the present application in view of the following remarks is respectfully requested.

### I. Claims 1-9

The Examiner rejected claims 1-9 under § 102 as being anticipated by Rostoker.

Claims 2-9 are dependent directly or indirectly on independent claim 1. Claim 1 recites a method of placing a set of circuit elements in the circuit layout for a placer that partitions a region of a circuit layout into several sub-regions. This method identifies during a placement operation, for a set of sub-regions that contain the circuit elements, a connection graph that connects the set of sub-regions. The connection graph has at least one edge that is at least partially diagonal. The method identifies a placement cost from an attribute of the connection graph. The placement cost specifies a cost for the placement of the circuit elements. The method uses the placement cost, during a placement operation, to identify a placement for the circuit elements. The placement specifies positions in the circuit layout for the circuit elements.

Applicants respectfully submit that Rostoker does not disclose teach, or even suggest such a method. The Examiner identifies Figure 71 and column 59 of Rostoker as disclosing the identification of a connection graph during a placement operation limitation of claim 1. These passages of Rostoker, however, disclose a "three directional/diagonal routing Steiner tree" implemented during a routing operation. This Steiner tree as disclosed in Rostoker is not identified during a placement operation. Therefore, Rostoker does not disclose, teach or even suggest the recited method of claim 1 that identifies, during a placement operation, a connection graph that connects the set of sub-regions.

The Examiner identifies column 58, column 43 lines 22-30, column 44 lines 46+, and column 45 lines 21-26 of Rostoker as disclosing the identification of a placement cost from an attribute of the connection graph limitation of claim 1. These passages of Rostoker, however, disclose computing costs without reference to an attribute of a connection graph. These costs are computed prior to the identification of the "three-directional/diagonal routing Steiner tree," which the Examiner cites as a connection graph. Therefore, Rostoker does not disclose, teach, or even suggest the recited method of claim 1 which, after identifying a connection graph, identifies a placement cost from an attribute of the connection graph.

Moreover, Applicants have amended claim 1 to recite a method that uses the placement cost during a placement operation to identify a placement for the circuit elements, where the placement specifies positions in the circuit layout for the circuit elements. Rostoker does not disclose, teach, or even suggest this limitation of claim 1 because, as mentioned above, Rostoker does not identify a connection graph during a placement operation, or identify a placement cost from an attribute of the connection graph during a placement operation.

Accordingly, Applicants respectfully submit that Rostoker does not render claim 1 unpatentable. As claims 2-9 are dependent on claim 1, Applicants respectfully submit that claims 2-9 are patentable over Rostoker for at least the same reasons. In view of the foregoing, Applicants respectfully request reconsideration and withdrawal of the § 102 rejection of claims 1-9.

## II. Claims 10-18

The Examiner rejected claims 10-18 under § 102 as being anticipated by Rostoker.

Claims 11-18 are dependent directly or indirectly on independent claim 10. Claim 10 recites a computer readable medium that stores a program for placing a set of circuit elements in the circuit layout. This computer program is for a placer that partitions a region of a circuit layout into several sub-regions. The computer program has a first set of instructions for identifying during a placement operation, for a set of sub-regions that contain the circuit elements, a connection graph that connects the set of sub-regions. The connection graph has at least one edge that is at least partially diagonal. The computer program has a second set of instructions for identifying a placement cost from an attribute of the connection graph. The placement cost specifies a cost for the placement of the circuit elements. The computer program has a third set of instructions for using the placement cost, during a placement operation, to define a position in the in the circuit layout for the circuit elements.

Applicants respectfully submit that Rostoker does not disclose teach, or even suggest such a computer program. The Examiner identifies Figure 71 and column 59 of Rostoker as disclosing the identification of a connection graph during a placement operation limitation of claim 10. These passages of Rostoker, however, disclose a "three directional/diagonal routing

Steiner tree" implemented during a routing operation. This Steiner tree as disclosed in Rostoker is not identified during a placement operation. Therefore, Rostoker does not disclose, teach or even suggest the recited computer program of claim 10 that identifies, during a placement operation, a connection graph that connects the set of sub-regions.

The Examiner identifies column 58, column 43 lines 22-30, column 44 lines 46+, and column 45 lines 21-26 of Rostoker as disclosing the identification of a placement cost from an attribute of the connection graph limitation of claim 10. These passages of Rostoker, however, disclose computing costs without reference to an attribute of a connection graph. These costs are computed prior to the identification of the "three-directional/diagonal routing Steiner tree," which the Examiner cites as a connection graph. Therefore, Rostoker does not disclose, teach, or even suggest the recited computer program of claim 10 which, after identifying a connection graph, identifies a placement cost from an attribute of the connection graph.

Moreover, Applicants have amended claim 1 to recite a method that uses the placement cost during a placement operation to define a position in the circuit layout for the circuit elements. Rostoker does not disclose, teach, or even suggest this limitation of claim 10 because, as mentioned above, does not identify a connection graph during a placement operation, or identify a placement cost from an attribute of the connection graph during a placement operation.

Accordingly, Applicants respectfully submit that Rostoker does not render claim 10 unpatentable. As claims 11-18 are dependent on claim 10, Applicants respectfully submit that claims 11-18 are patentable over Rostoker for at least the same reasons. In view of the foregoing, Applicants respectfully request reconsideration and withdrawal of the § 102 rejection of claims 10-18.

## CONCLUSION

In view of the foregoing, it is submitted that all pending claims, namely claims 1-18, are in condition for allowance. Reconsideration of the rejections and objections is requested. Allowance is earnestly solicited at the earliest possible date.

Respectfully submitted,

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